

Application No. 10/039,055
Attorney Docket No: 25143A US

IN THE CLAIMS

1. (Currently Amended) An energy-absorbing element capable of absorbing a portion of impact energy created during a collision, the energy-absorbing element comprising at least one layer of composite material ~~having a semi-compacted thickness less than an initial prepared thickness comprising~~ consisting essentially of a mixture of mineral fibers and organic fibers.
2. (Previously Amended) An energy absorbing element as set forth in claim 1, wherein said mineral fibers and said organic fibers are entangled as a co-fiberized composite material.
3. (Original) An energy absorbing element as set forth in claim 2, wherein said mineral fibers comprise glass fibers.
4. (Currently Amended) An energy absorbing element as set forth in claim 3, ~~where~~ wherein said organic fibers are formed from a material selected from the group consisting of polypropylene[[;]], polyphenylene sulfide[[;]], polyethylene terephthalate (PET)[[;]], polyethylene[[;]], poly(α -olefin) copolymers[[;]], nylon 6[[;]], nylon 66[[;]], nylon 46[[;]], nylon 12[[;]], copolyamides[[;]], polycarbonate[[;]], copolymers of polycarbonate[[;]], polybutylene terephthalate (PBT)[[;]], polypropylene terephthalate (PPT)[[;]], polyphenylene ether (PPE)[[;]] and blends thereof.
5. (Previously Amended) An energy absorbing element as set forth in claim 1, wherein said semi-compacted thickness has a maximum thickness of from about 5 mm to about 50 mm.

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6. (Original) An energy absorbing element as set forth in claim 5, wherein said layer has a density of from about 500 grams/m² to about 3000 grams/m².

7. (Original) An energy absorbing element as set forth in claim 6, wherein said layer comprises a sheath having a generally U- or V- shape and is adapted to be positioned adjacent to a vehicle pillar.

8. (Original) An energy absorbing element as set forth in claim 1, wherein the composite material comprises mineral fibers in an amount from about 10% to about 90% by weight, based on the total weight of the composite material, and organic fibers in an amount from about 10% to about 90% by weight, based on the total weight of the composite material.

9 – 12 (Canceled)

13. (Currently Amended) A trim panel/sheath combination adapted to be secured to a vehicle pillar comprising:

a polymeric trim panel; and

a sheath formed of composite material ~~having a semi-compacted thickness less than an initial prepared thickness comprising~~ consisting essentially of a mixture of mineral fibers and organic fibers.

14. (Previously Amended) A trim panel/sheath combination as set forth in claim 13, wherein said mineral fibers and said organic fibers are entangled as a co-fiberized composite

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material.

15. (Original) A trim panel/sheath combination as set forth in claim 14, wherein said mineral fibers comprise glass fibers.

16. (Currently Amended) A trim panel/sheath combination as set forth in claim 15, wherein said organic fibers are formed from a material selected from the group consisting of polypropylene[;], polyphenylene sulfide[;], polyethylene terephthalate (PET)[;], polyethylene[;], poly(α -olefin) copolymers[;], nylon 6[;], nylon 66[;], nylon 46[;], nylon 12[;], copolyamides[;], polycarbonate, copolymers of polycarbonate[;], polybutylene terephthalate (PBT)[;], polypropylene terephthalate (PPT)[;], polyphenylene ether (PPE)[;] and blends thereof.

17. (Previously Amended) A trim panel/sheath combination as set forth in claim 13, wherein said semi-compacted thickness has a maximum thickness of from about 5 mm to about 50 mm.

18. (Original) A trim panel/sheath combination as set forth in claim 17, wherein said sheath has a density of from about 500-grams/m² to about 3000 grams/m².

19. (Original) A trim panel/sheath combination as set forth in claim 18, wherein said sheath has a generally U- or V- shape and is adapted to be positioned between the pillar and the trim panel.

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20. (Original) A trim panel/sheath combination as set forth in claim 13, wherein the composite material comprises mineral fibers in an amount from about 10% to about 90% by weight, based on the total weight of the composite material, and organic fibers in an amount from about 10% to about 90% by weight, based on the total weight of the composite material.

21. (Original) A trim panel/sheath combination as set forth in claim 13, wherein said trim panel has a density of from about 0.5 grams/cm³ to about 1.5 grams/cm³.

22. (Currently Amended) A trim panel/sheath combination as set forth in claim 13,
wherein adapted to be secured to a vehicle pillar comprising:
—— a polymeric trim panel; and
—— a sheath formed of composite material comprising a mixture of mineral fibers and
organic fibers, said combination ~~[[having]]~~ has an HICd value of less than about 1000.

23. (New) An energy-absorbing element capable of absorbing a portion of impact energy created during a collision, the energy-absorbing element comprising at least one layer of composite material comprising a mixture of mineral fibers and organic fibers, said mineral fibers and said organic fibers both being present in a fibrous form in said energy-absorbing element.

24. (New) An energy absorbing element as set forth in claim 23, wherein the composite material comprises mineral fibers in an amount from about 10% to about 90% by weight, based on the total weight of the composite material, and organic fibers in an amount from about 10% to about 90% by weight, based on the total weight of the composite material.

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25. (New) An energy absorbing element as set forth in claim 23, wherein said mineral fibers and said organic fibers are entangled as a co-fiberized composite material.

26. (New) An energy absorbing element as set forth in claim 25, wherein said mineral fibers comprise glass fibers and said organic fibers are formed from a material selected from the group consisting of polypropylene, polyphenylene sulfide, polyethylene terephthalate (PET), polyethylene, poly(α -olefin) copolymers, nylon 6, nylon 66, nylon 46, nylon 12, copolyamides, polycarbonate, copolymers of polycarbonate, polybutylene terephthalate (PBT), polypropylene terephthalate (PPT), polyphenylene ether (PPE) and blends thereof.